UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,920	09/29/2000	Gary D. Zimmerman	MP0966(13036/5)	8995

			EXAMINER
60537	7590	12/12/2006	PHAM, THIERRY L

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ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/675,920	ZIMMERMAN ET AL.
	Examiner	Art Unit
	Thierry L. Pham	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 November 2006</u>.

2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final. .

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

　　4a) Of the above claim(s) <u>10-15</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9, 16-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) .
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

- This action is responsive to the following communication: RCE filed on 11/14/06.

- Claims 1-18 are pending; claim 4 has been canceled; claims 10-15 has been withdrawn.

Claim Objections

Claims 4 & 6 are objected to because of the following informalities:

- Claim 4 status identifier is incorrect. It should read as "previously presented".

- Claim 6 is currently amended, but does not contain any changes. All changes to claim texts should be underline or bracket/strike-through. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9, 16-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Young No (US 6587140), Terashima et al (US 6538762), and in view of Hirst et al (US 5930553).

Regarding claim 1, Young No discloses a printing system (*printing system, fig. 1*) comprising:

- a host device (*host device 1, fig. 1*) for executing programs;

- an office machine (*printer 5, fig. 1*) having a print engine for receiving print engine ready data (*col. 4, lines 39-42*) and based thereon for rendering images and a PC card slot (*PC card slot 83, fig. 1*) for receiving PC cards;

- a PC card (*removable PC card 7, fig. 1*) for removably coupling with the PC card slot (*PC card slot 83, fig. 1*) of the office machine and for coupling with the host device (*host device 1, fig. 1*), the PC card having a printer controller integrated circuit (*PC card 7 includes an*

intelligent circuit 90, fig. 2) for providing printer controller functions (*printer controller functions, col. 4, lines 25 to col. 5, lines 32*) for the office machine, the printer controller integrated circuit for receiving printer controller ready data from the host device (*image data from host device 1, fig. 1, col. 2, lines 1-38*) and based thereon for generating print engine ready data (*col. 4, lines 39-42*), wherein the office machine requires the PC card with printer controller (*printer 5 requires PC card 7 to operate, col. 1, lines 53-60 and col. 2, lines 9-38*) to be coupled thereto to render images, and wherein the printer controller may be replaced or upgraded (*It is well known in the art that a defected and/or out-dated PC card can be replaced with a newer and/or most updated PC card manually by a user since a PC card as taught by Young No is detachable and removable*) by a user intervention of the manufacturer of the office machine.

Young No teaches an example of a PC card 7 contains a printer controller 90 for controlling operations of the printer 5, but does not explicitly teach wherein a printer 5 does not have any printer controller circuit, and wherein PC card 7 providing substantially all printer controller functions. In other words, Young No fails to teach and/or suggest all printer-controlling circuits are incorporated in a PC card.

Terashima, in the same field of endeavor for printing, teaches a well-known example of a printer does not have any printer controller (printer controllers are external of printer, fig. 2), and wherein all printer controllers are incorporate in a single circuit (printer controllers are incorporated in a single integrated ASIC circuit 5, fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to integrate ASIC circuit 5 of Terashima onto PC card 7 of Young No since both are externally of printer and are formed in integrated circuit, thereby, enabling users with capabilities of portability and to reduce hardware spaces by incorporating all printer controllers into a single integrated circuit embedded on a PC card.

However, combinations of Young No and Terashima do not teach and/or suggest an automatic update module that automatically downloads to the printer controller from a source an updated version of printer controller firmware.

Hirst, in the same field of endeavor for printing, teaches a well-known example of an automatic update module (memory 19 stores software update, fig. 2 & 5, col. 3, lines 40-55 and

col. 5, lines 8-24) that automatically downloads (fig. 5) to the printer controller from a source an updated version of printer controller firmware.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify PC card of Young No to include an automatic update module that automatically downloads to the printer controller from a source an updated version of printer controller firmware as taught by Hirst because it enhances the printer's operating efficiency and to improve output quality performance by updating new controller programs, and in addition, performs downloading and managing automatically without human intervention help reduces personnel costs.

Therefore, it would have been obvious to combine Young No and Terashima with Hirst to obtain the invention as specified in claim 1.

Regarding claim 2, Young No further teaches the printing system of claim 1 further comprising: a printer controller firmware (DRAM 98 for storing printer controller firmware, fig. 2, col. 2, lines 25-30, Young) that when executed by the printer controller causes the printer controller to perform printer controller functions.

Regarding claim 3, Hirst further teaches printing system of claim 2, wherein the source is one of a web server (fig. 5) and a computer readable medium.

Regarding claim 4, Hirst further teaches the printing system of claim 2 wherein the automatic update module when executing on the host device automatically downloads (automatically downloading updated/version of printer driver via Internet/Website, fig. 5, col. 2, lines 45-48) to the printer formatter an updated version of printer formatter firmware.

Regarding claims 5 & 8, which recite limitations that are similar and in the same scope of invention as to those in claim 1 above; therefore, claims 5 & 8 are rejected for the same rejection rationale/basis as described in claim 1.

Regarding claim 6, Young No further discloses the office machine of claim 5 further comprising: a print engine ready data interface (cable 76, fig. 1) for coupling to a PC card and selectively receiving print engine ready data therefrom.

Regarding claim 7, Young No further discloses the office machine of claim 5 wherein the office machine is one of a laser printer, inkjet printer (inkjet printer 5, fig. 1), and all-in-one office machine.

Regarding claim 9, Young No further discloses a connector (connector 41, fig. 1) having a print engine ready data interface for coupling to the host machine (couple to office machine and image system fig. 1, col. 6, lines 1-5) and selectively (PC card interface, fig. 3) receiving print engine ready data therefrom.

Regarding claims 16-18, Young No further teaches the removable PC card includes a form factor that is one of a form factor of the PCMCIA type I card, a form factor of PCMCIA type II card, and a form factor of PCMCIA type III card. Types of PCMCIA PC card is widely available and known in the art.

Response to Arguments

Applicant's arguments, see pages 10-12, filed 11/14/06, with respect to the rejection(s) of claim(s) 1, 5, and 8 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.
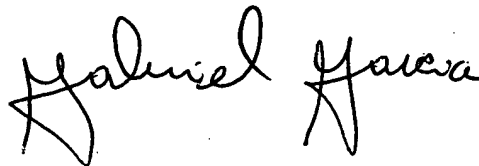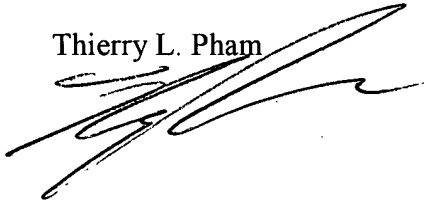
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thierry L. Pham

GABRIEL I. GARCIA
PRIMARY EXAMINER